

**WELCOME !**

# Front-end Development

Benjamin Ogbonna  
DSC Uniabuja



# OUTLINE

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HTML Input Types

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HTML Media

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# INTRODUCTION

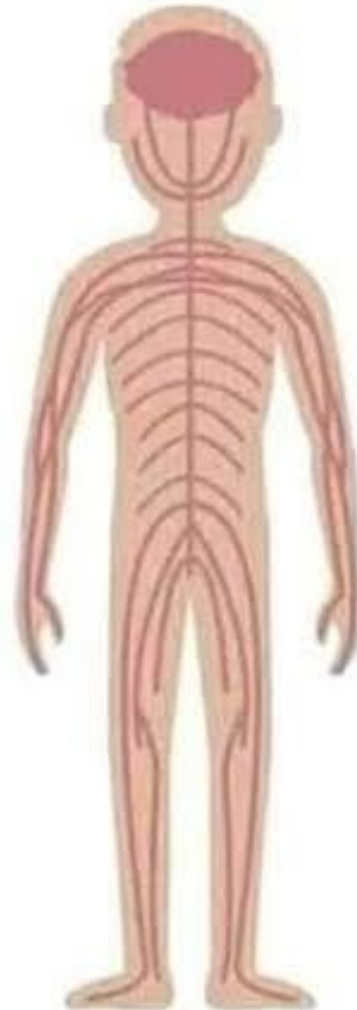
Web development is the work involved in developing a website for the internet (WWW). Web development can range from developing a simple static page of plain text to complex web applications, electronic business, and social networks services. A list of tasks to which web development commonly refers to may include: web engineering, client-side/server-scripting, web design, web server & network security and e-commerce development.

# ANALOGY

HTML

JS

CSS



# What is HTML?

HTML is the standard markup language for creating/describing documents (Web pages). It describes the structure of a Web page. It consists of a series of elements. HTML elements tell the browser how to display the content.

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- A markup language is a set of **markup tags**
- HTML documents are described by **HTML tags**
- Each HTML tag **describes** different document content

## Browsers and HTML

The purpose of a web browser (like Internet **Chrome**, **Firefox**..etc) is to read HTML documents and display them as web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page. HTML documents are also called web pages.

## HTML Page Structure

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title></title>
5 </head>
6 <body>
7
8 </body>
9 </html>
```



## The <!DOCTYPE> Declaration

The <!DOCTYPE> declaration helps the browser to display a web page correctly.

There are different document types on the web.

To display a document correctly, the browser must know both type and version.

**Common declaration:**     **<!DOCTYPE html>**

## HTML Editors

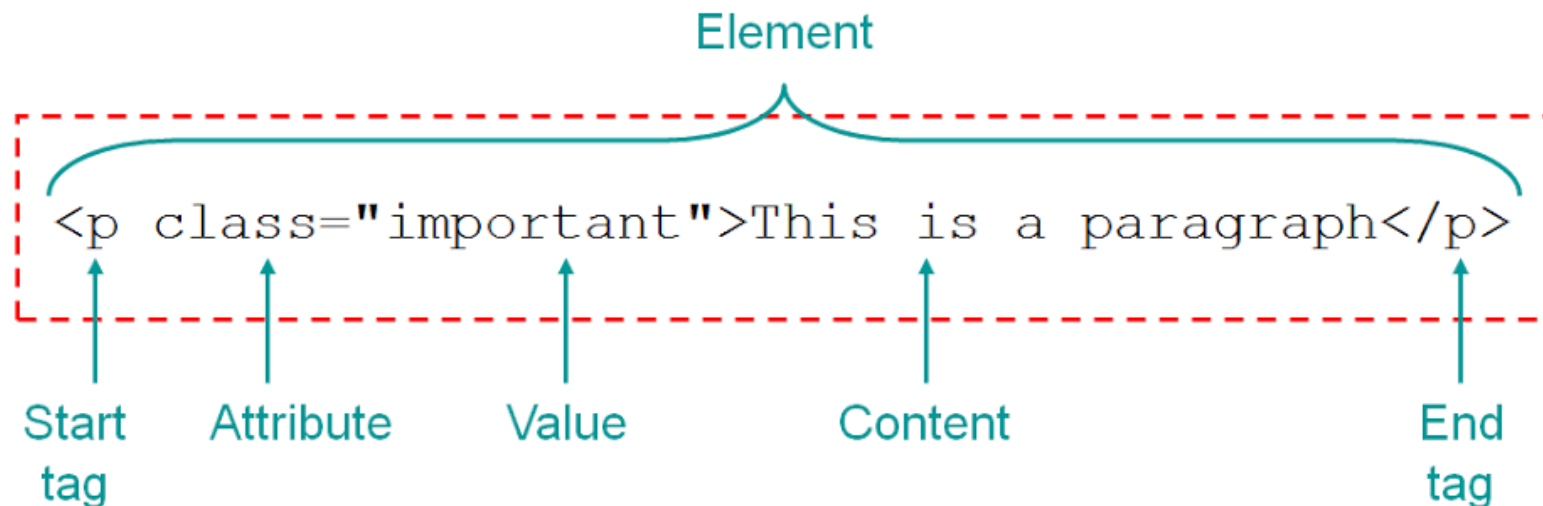
HTML can be written and edited using many different editors like Dreamweaver and Visual Studio. However, in this tutorial we use a plain text editor (like Notepad and Sublime) to edit HTML. We believe using a plain text editor is the best way to learn HTML.

## Tags, Attribute and Elements

**Elements:** an element is a chunk of code comprising of an opening and closing tag ( **div**, **p**, **img**)

**Tags:** Tags are the bits that makes up elements (**<p></p>**). Usually comes in pairs (opening and closing).

**Attributes:** An attribute is a piece of code attached to a tag which supplies additional information ( **alt attribute**).



# HTML - Getting Started

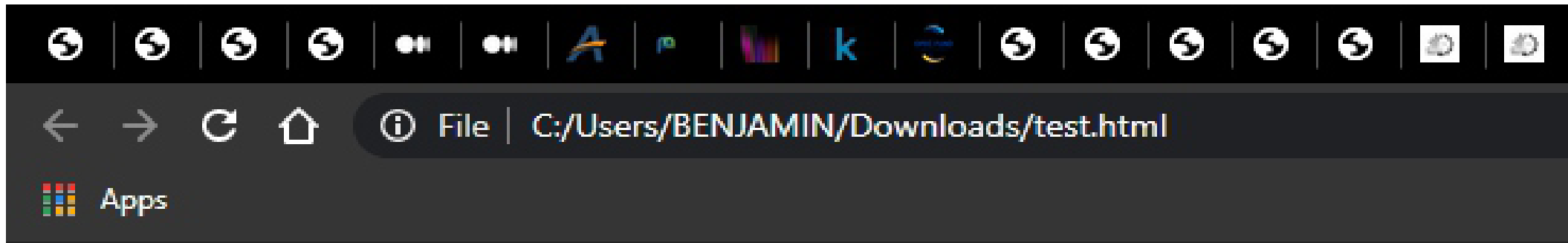
- You need an editor / IDE.
- You don't need a web server or website.
- When you save an HTML file, you can use either the .htm or the .html file extension. There is no difference, it is entirely up to you.
- Don't Forget the End/closing Tag.
- HTML tags are not case sensitive: <P> means the same as <p>.
- Always comment your code.

## HTML Headings

Headings are defined with the <h1> to <h6> tags. <h1> defines the most important heading. <h6> defines the least important heading.

**Headings Are Important.** Use HTML headings for headings only. Don't use headings to make text **BIG** or **bold**. Search engines use your headings to index the structure and content of your web pages. Users skim your pages by its headings. It is important to use headings to show the document structure. h1 headings should be main headings, followed by h2 headings, then the less important h3, and so on.

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title></title>
5 </head>
6 <body>
7   <h1>This is a heading.</h1>
8   <h2>This is a heading.</h2>
9   <h3>This is a heading.</h3>
10
11 </body>
12 </html>
```



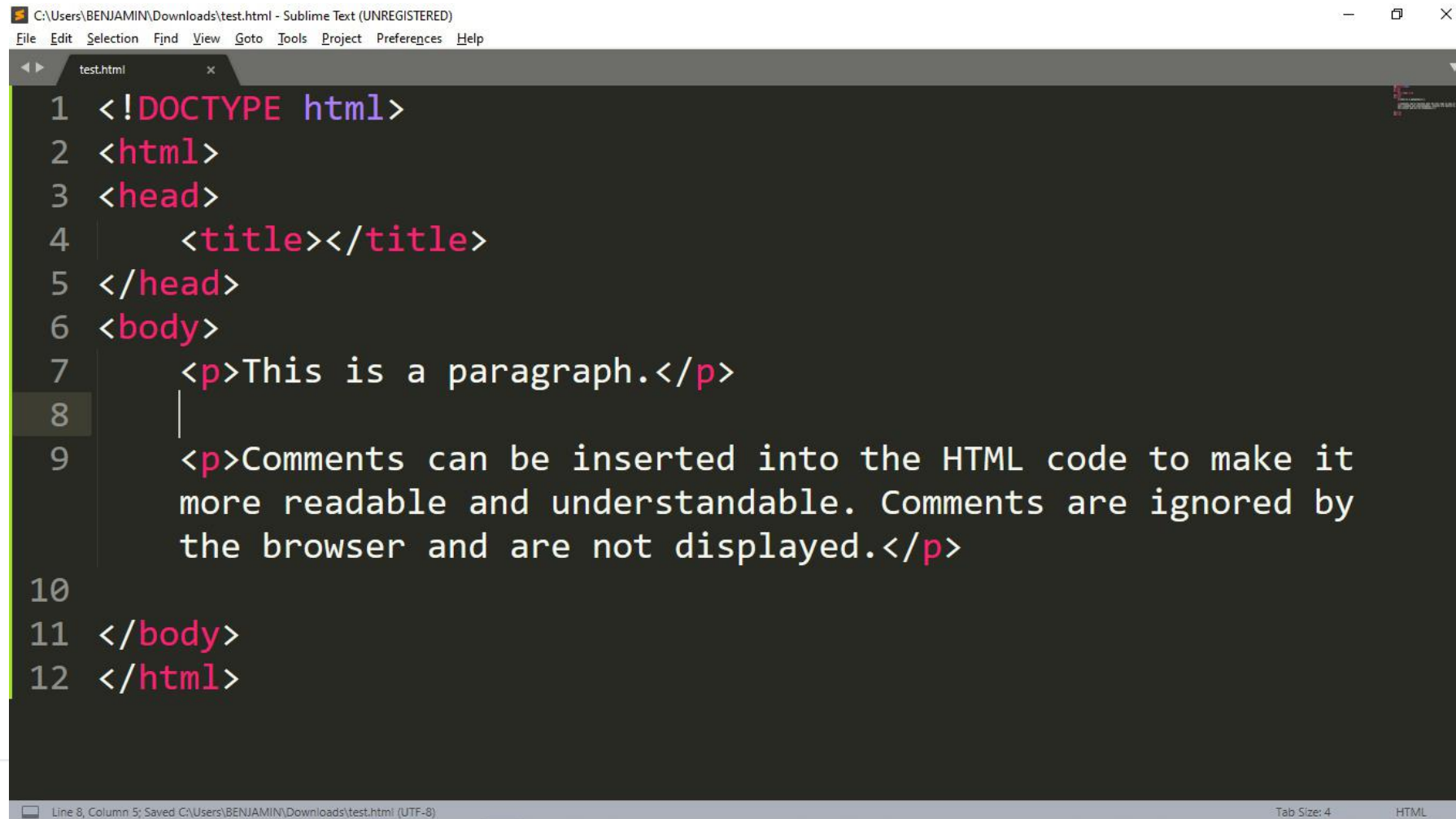
**This is a heading.**

**This is a heading.**

**This is a heading.**

# HTML Paragraphs

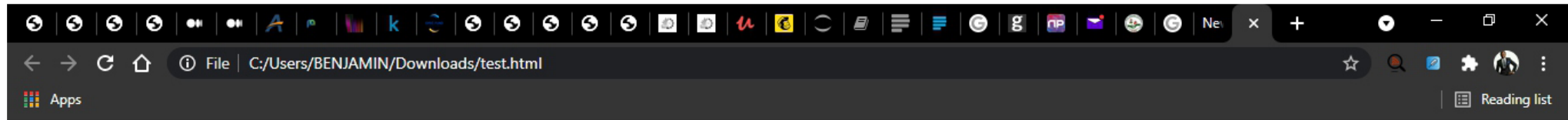
HTML documents are divided into paragraphs. The HTML **<p>** element defines a **paragraph**.



```
C:\Users\BENJAMIN\Downloads\test.html - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

test.html
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title></title>
5 </head>
6 <body>
7   <p>This is a paragraph.</p>
8   |
9   <p>Comments can be inserted into the HTML code to make it
10  more readable and understandable. Comments are ignored by
11  the browser and are not displayed.</p>
12 </body>
13 </html>
```

Line 8, Column 5: Saved C:\Users\BENJAMIN\Downloads\test.html (UTF-8) Tab Size: 4 HTML



This is a paragraph.

Comments can be inserted into the HTML code to make it more readable and understandable. Comments are ignored by the browser and are not displayed.



# HTML Styles

Setting the style of an HTML element, can be done with the **style attribute**.  
The HTML style attribute has the following **syntax**:

***style="property:value;"***

## Examples:

- Background Color
- Text Color
- Fonts
- Text Size
- Text Alignment

# HTML Formatting

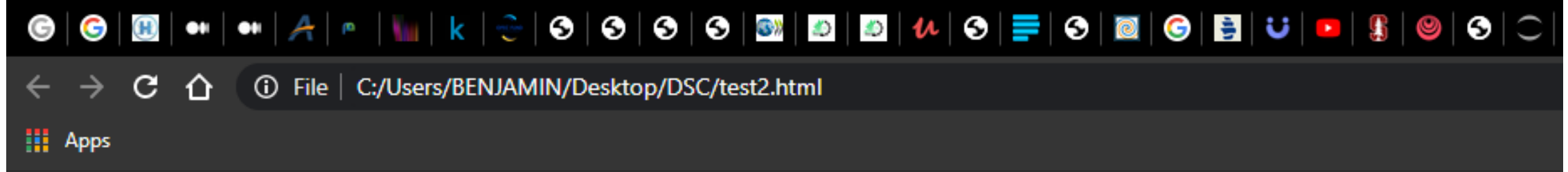
HTML also defines special **elements** for defining text with a special **meaning**. HTML uses elements like `<b>` and `<i>` for formatting output, like **bold** or *italic* text.

Formatting elements were designed to display special **types of text**:

- Bold text
- Italic text
- Emphasized text
- Marked text
- Small text
- Deleted text
- Subscripts
- Superscripts

```
test2.html x untitled
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title></title>
5 </head>
6 <body>
7 <p><b>This text is bold</b></p>
8 <p><strong>This text is strong</strong></p>
9 <p>This text is <u>Underlined</u></p>
10 <p><i>This text is italic</i></p>
11 <p><em>This text is emphasized</em></p>
12 <p><small>This text is Small</small> </p>
13 <p>This text is<mark>Marked</mark></p>
14 <p>This text is <del>Deleted</del></p>
15 <p>H<sub>2</sub>SO<sub>4</sub></p>
16 <p>13<sup>th</sup>April, 2021</p>
17
18 </body>
19 </html>
```





**This text is bold**

**This text is strong**

This text is Underlined

*This text is italic*

*This text is emphasized*

This text is Small

This text is **Marked**

This text is ~~Deleted~~

H<sub>2</sub>SO<sub>4</sub>

13<sup>th</sup>April, 2021

# HTML Comments

Comments are used for documentation purposes and also to aid code readability both for you and anyone using your code.

```
test2.html  untitled
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title></title>
5  </head>
6  <body>
7  <!-- This is a comment -->
8  <p><b>This text is bold</b></p>
9  <p><strong>This text is strong</strong></p>
10 <p>This text is <u>Underlined</u></p>
```

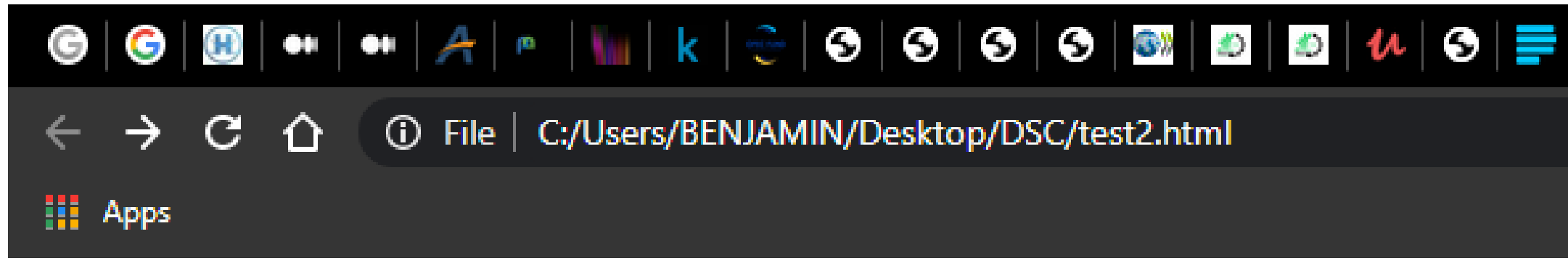
## HTML Links

Links are found in nearly all web pages. Links allow users to click their way from page to page. HTML links are hyperlinks.

A hyperlink is a text or an image you can click on, and jump to another document. In HTML, links are defined with the `<a>` tag: `<a href="url">link text</a>`. The **href** attribute specifies the destination address (`http://www.w3schools.com/html/`) . The **link text** is the visible part (Visit our HTML tutorial).

**The target Attribute: `_self` and `_blank`**

```
<body>
<!-- This is a link to another page -->
<h2>Example of Link</h2>
<a href="test.html">Go to Test Page</a>
</body>
</html>
```



## Example of Link

[Go to Test Page](#)

# HTML Images

In HTML, images are defined with the **<img>** tag.

The **<img>** tag is empty, it contains attributes only, and does not have a closing tag. The **src** attribute specifies the URL (location) of the image:

```
test2.html x untyped
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title></title>
5  </head>
6  <body>
7      <!-- This is a link to another page -->
8      <h2>Image of Dog</h2>
9      
10
11  </body>
12  </html>
```





## Image of Dog



## Using an Image as a link

An image can be used as a link too as follows:

```
<a href="test.html">
```

```
  
```

```
</a>
```

# HTML List

The most common HTML lists are ordered and unordered lists:

**An unordered** list starts with the `<ul>` tag. Each list item starts with the `<li>` tag. The list items will be marked with bullets:

## The Style Attribute:

- Disc
- Circle
- Square
- None

```
test2.html x untitled
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title></title>
5  </head>
6  <body>
7  <h2>Items for Breakfast</h2>
8  <ul>
9      <li>Coffee</li>
10     <li>Sugar</li>
11     <li>Milk</li>
12 </ul>
13 </body>
14 </html>
```



# Items for Breakfast

- Coffee
- Sugar
- Milk

## Ordered HTML Lists

An ordered list starts with the `<ol>` tag. Each list item starts with the `<li>` tag. The list items will be marked with numbers or alphabet:

### The Style Attribute:

- 1. 1
- a) a
- A. A
- i. i
- l. l

```
test2.html x untitled
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title></title>
5 </head>
6 <body>
7 <h2>Items for Breakfast</h2>
8 <ol>
9   <li>Coffee</li>
10  <li>Tea</li>
11  <li>Milk</li>
12 </ol>
13 </body>
14 </html>
```



# Items for Breakfast

1. Coffee
2. Tea
3. Milk

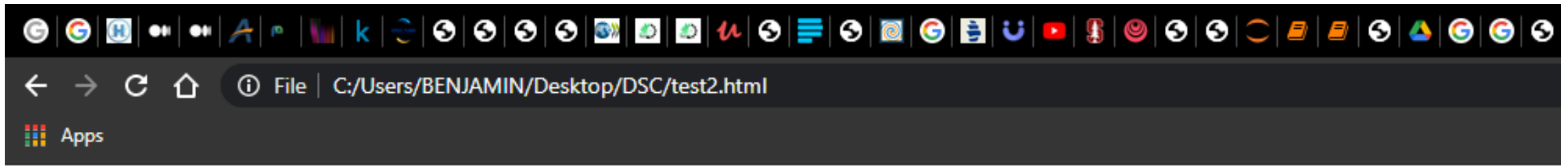
## HTML Tables:

Tables are used to arrange/store data in row and columns. In HTML we use the `<table>` tag.

### HTML Table Example

Number	First Name	Last Name	Points
1	Eve	Jackson	94
2	John	Doe	80
3	Adam	Johnson	67
4	Jill	Smith	50

```
6 </body>
7 <h2>Names and Scores of Students</h2>
8 <table style="width:50%" border="1">
9     <tr>
10         <td>S/No.</td>
11         <td>First Name</td>
12         <td>Last Name</td>
13         <td>Point</td>
14     </tr>
15     <tr>
16         <td>1</td>
17         <td>Jill</td>
18         <td>Smith</td>
19         <td>50</td>
20     </tr>
21     <tr>
22         <td>2</td>
23         <td>Eve</td>
24         <td>Jackson</td>
25         <td>94</td>
26     </tr>
27 </table>
```



# Names and Scores of Students

S/No.	First Name	Last Name	Point
1	Jill	Smith	50
2	Eve	Jackson	94



# HTML FORMS

HTML forms are used to collect user input. The **<form>** element defines an HTML form:

***<form>***

***form elements***

***</form>***

Form elements are different types of input elements, checkboxes, radio buttons, submit buttons, and more.

The **<input>** element is the most important **form element**. The **<input>** element has many variations, depending on the **type** attribute.

```
2  <html>
3  <head>
4      <title>Index</title>
5  </head>
6  <body>
7
8  <form>
9      First name:<br>
10     <input type="text" name="firstname"><br>
11     Last name:<br>
12     <input type="text" name="lastname">
13 </form>
14
15 </body>
16 </html>
```



First name:

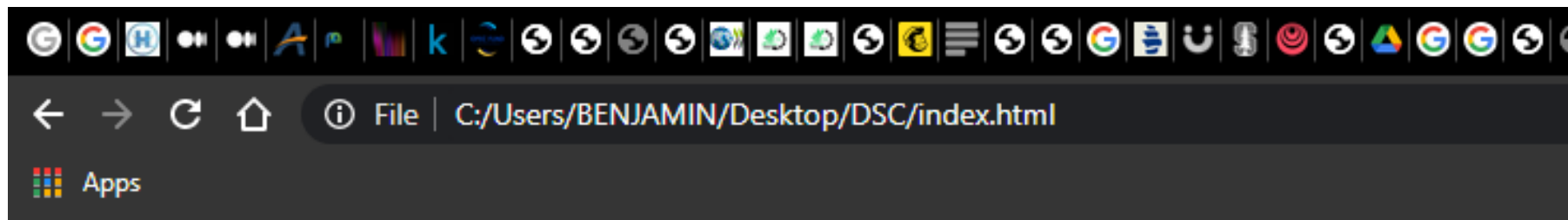
Last name:

**Note:** The form itself is not visible. Also note that the default width of a text field is 20 characters.

# Password

Input Type: password

```
test2.html x untitled index.html x
2 <html>
3 <head>
4   <title>Index</title>
5 </head>
6 <body>
7
8 <form>
9   User name:<br>
10  <input type="text" name="username"><br>
11  User password:<br>
12  <input type="password" name="psw">
13 </form>
14
15 </body>
16 </html>
```



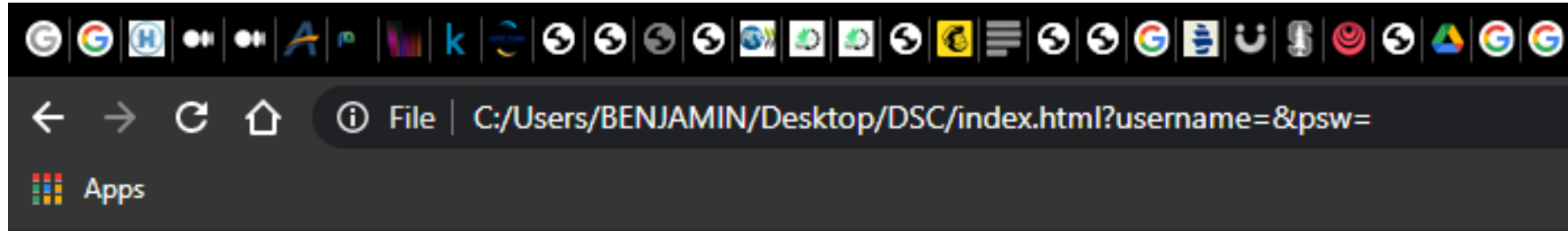
User name:

User password:

# Submit

Input Type: submit

```
2 <html>
3 <head>
4   <title>Index</title>
5 </head>
6 <body>
7
8 <form>
9   User name:<br>
10  <input type="text" name="username"><br>
11  User password:<br>
12  <input type="password" name="psw">
13  <input type="submit" value="Login">
14 </form>
15
16 </body>
17 </html>
```



User name:

User password:

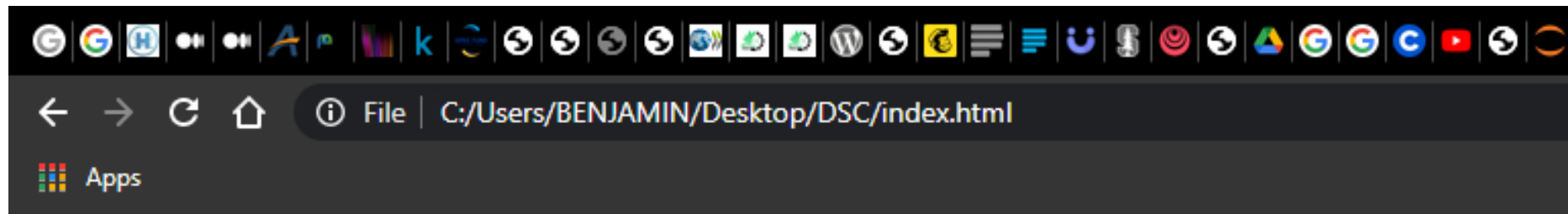
Login

## Radio

`<input type="radio">` defines a radio button.

```
test2.html x  untitled  index.html x
2  <html>
3  <head>
4      <title>Index</title>
5  </head>
6  <body>
7
8  <form>
9      <input type="radio" name="gender" value="male"> Male<br>
10     <input type="radio" name="gender" value="female"> Female<br>
11     <input type="radio" name="gender" value="other"> Other
12 </form>
13
14 </body>
15 </html>
```





- ☒ Male
- ☐ Female
- ☐ Other

# CHECKBOX

`<input type="checkbox">` defines a **checkbox**. Checkboxes let a user select ZERO or MORE options of a limited number of choices.

```
<head>
  <title>Index</title>
</head>
<body>

<form>
  <input type="checkbox" name="language" value="Python"> Python<br>
  <input type="checkbox" name="language" value="PHP"> PHP<br/>
  <input type="checkbox" name="language" value="Java"> Java<br/>
  <input type="checkbox" name="language" value="C++"> C++
</form>

</body>
```



☐ Python

☐ PHP

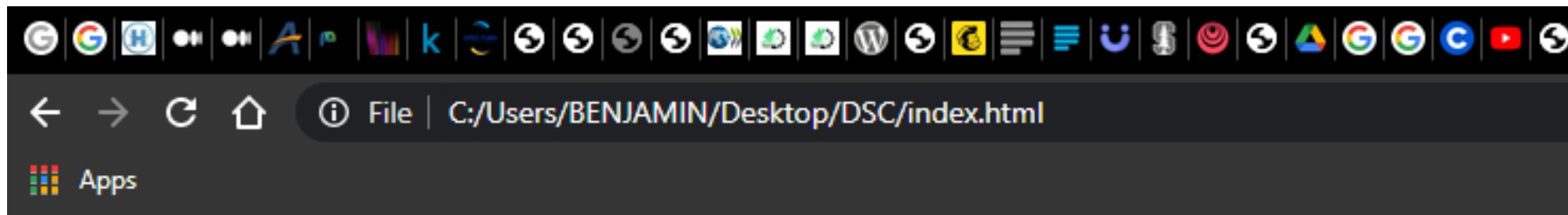
☐ Java

☐ C++

## NUMBER

The `<input type="number">` is used for input fields that should contain a numeric value. You can set restrictions on the numbers.

```
test2.html x  untitled  index.html x
2  <html>
3  <head>
4      <title>Index</title>
5  </head>
6  <body>
7
8  <form>
9      Quantity (between 1 and 5):
10     <input type="number" value="1" name="quantity" min="1" max="5">
11 </form>
12
13 </body>
14 </html>
```

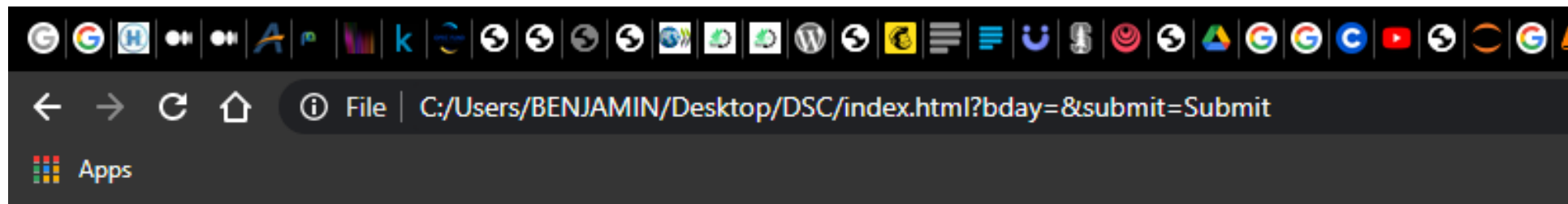


Quantity (between 1 and 5):

## DATE

The `<input type="date">` is used for input fields that should contain a date. Depending on browser support, a date picker can show up in the input field.

```
test2.html x  untitled  index.html
2  <html>
3  <head>
4      <title>Index</title>
5  </head>
6  <body>
7
8  <form>
9      Birthday:
10     <input type="date" name="bday">
11     <input type="submit" name="submit" value="Submit">
12 </form>
13
14 </body>
15 </html>
```



Birthday: 25 - Apr - 2021



Submit

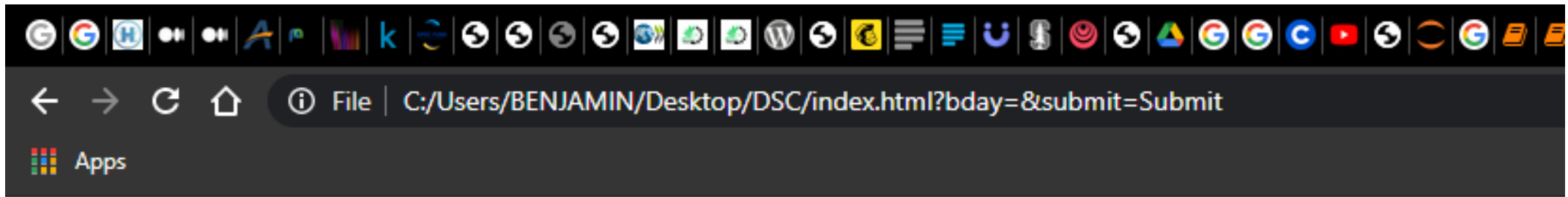
# SELECT

The <select> Element (Drop-Down List)

The **<select>** element defines a **drop-down** list:

```
test2.html x  untitled  index.html x
2  <html>
3  <head>
4      <title>Index</title>
5  </head>
6  <body>
7  Preferred Phone:
8  <select name="phones">
9      <option value="samsung">Samsung</option>
10     <option value="iphone">iphone</option>
11     <option value="tecno">Tecno</option>
12     <option value="infinix">Infinix</option>
13 </select>
```





Prefered Phone: 

Samsung ▼

Samsung

iphone

Tecno

Infinix

## EXTRA

HTML5 added several new input types:

- Color
- Date
- Datetime,
- Datetime-local
- Email
- Month
- Number
- Range
- Search
- Tel
- Time
- Url
- Week...etc

# HTML Media

What is Multimedia?

Multimedia comes in many different formats. It can be almost anything you can hear or see. **Examples: Pictures, music, sound, videos, records, films, animations, and more.** Web pages often contain multimedia elements of different types and formats. In this chapter you will learn about the different multimedia formats.

The support for sounds, animations, and videos is handled differently by various browsers. Different types and formats are supported, and some formats require extra helper programs (plug-ins) to work.

# Multimedia Formats

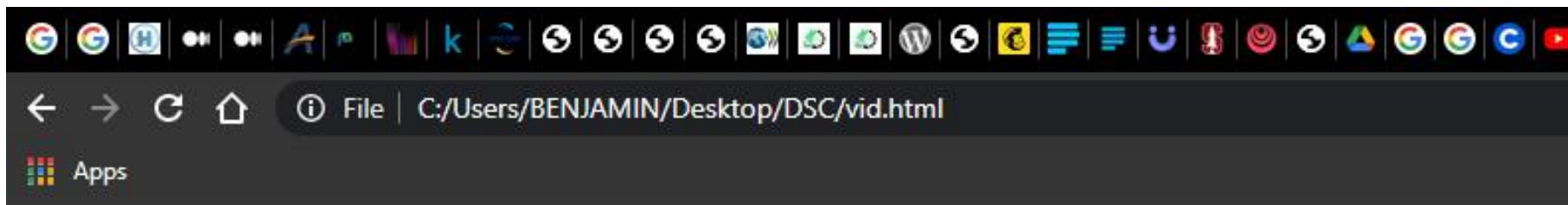
Multimedia elements (like sounds or videos) are stored in media files. The most common way to discover the type of a file, is to look at the file extension. When a browser sees the file extension **.htm or .html**, it will treat the file as an HTML file. Pictures are recognized by extensions like **.gif, .png and .jpg**.

Multimedia files also have their own formats and different extensions like: **.swf, .wav, .mp3, .mp4, .mpg, .wmv, and .avi**.

## HTML VIDEO

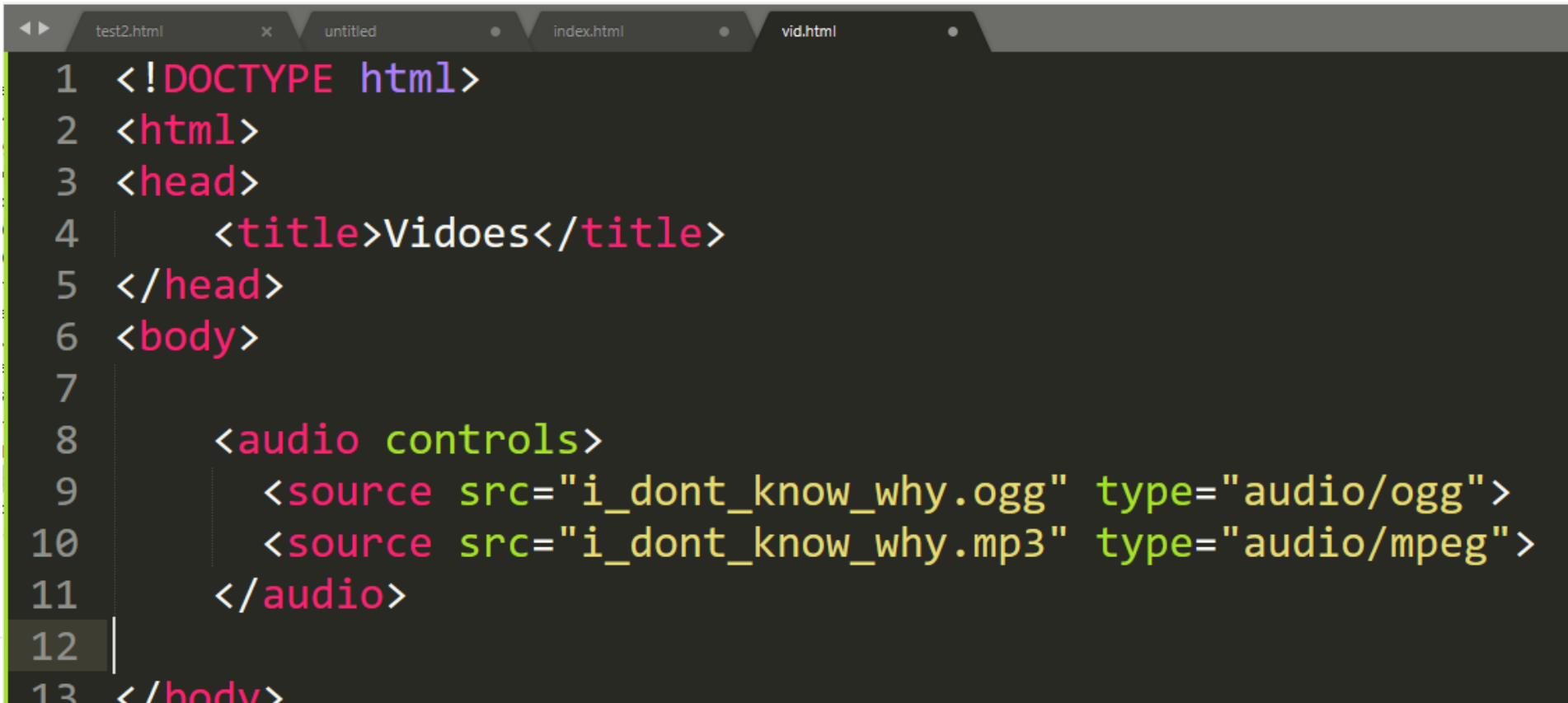
Before HTML5, there was no standard for showing videos on a web page. Before HTML5, videos could only be played with a plug-in (like flash). The HTML5 <video> element specifies a standard way to embed a video in a web page.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Vidoes</title>
5  </head>
6  <body>
7
8      <video width="500" height="300" controls>
9          <source src="ai.mp4" type="video/mp4">
10         <source src="ai.ogg" type="video/ogg">
11     </video>
12 </body>
13 </html>
```

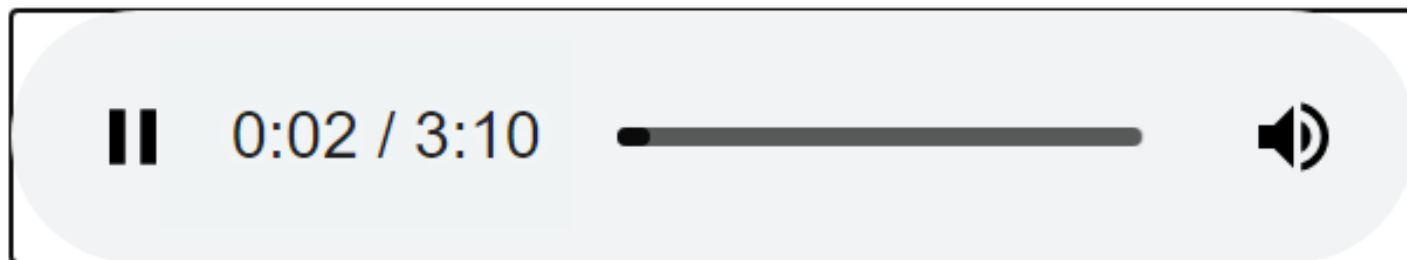
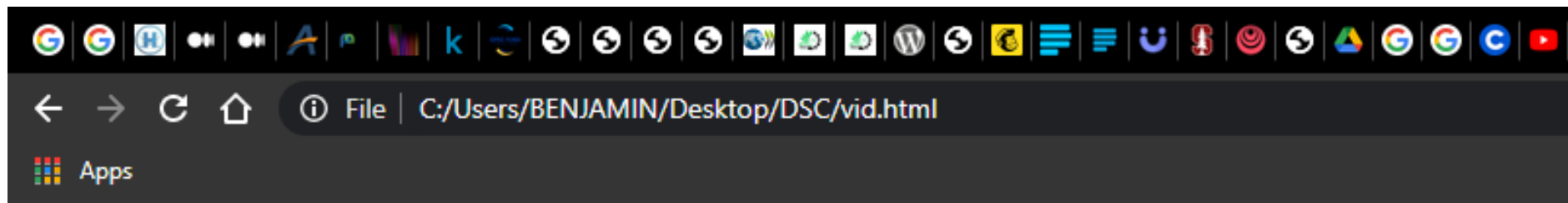


## HTML Audio

Before HTML5, there was no standard for playing audio files on a web page. Before HTML5, audio files could only be played with a plug-in (like flash). The HTML5 <audio> element specifies a standard way to embed audio in a web page.

A screenshot of a code editor with a dark theme. The editor has several tabs at the top: 'test2.html', 'untitled', 'index.html', and 'vid.html'. The 'vid.html' tab is active. The code is written in a syntax-highlighted format. Line numbers 1 through 13 are visible on the left. The code defines an HTML document with a title 'Vidoes' and an audio player. The audio player uses the <audio controls> element and includes two <source> tags for different audio formats: 'i\_dont\_know\_why.ogg' (audio/ogg) and 'i\_dont\_know\_why.mp3' (audio/mpeg).

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Vidoes</title>
5 </head>
6 <body>
7
8   <audio controls>
9     <source src="i_dont_know_why.ogg" type="audio/ogg">
10    <source src="i_dont_know_why.mp3" type="audio/mpeg">
11  </audio>
12
13 </body>
```





# Semantic HTML

A semantic element clearly describes its meaning to both the browser and the developer.

Examples of non-semantic elements: **<div>** and **<span>** - Tells nothing about its content.

Examples of semantic elements: **<form>**, **<table>**, and **<article>** - Clearly defines its content.

# Accessibility

Accessibility is the practice of making your websites usable by as many people as possible. Usually everyone should be inclusive in accessing your website either using different browsers and devices or people with disabilities(e.g visual impairment, cognitive impairment, mobile impairment, hearing impairment) when they use assistive technologies like screen readers to access your site for blind users.

# Question ?